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FILE LAST UPDATED: 8 Feb 2007  (20070208/ED)

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PROCESSING COMPLETED FOR L7
L70            3 DUP REM L16 L7 (2 DUPLICATES REMOVED)
                 ANSWERS '1-2' FROM FILE WPIX
                 ANSWER '3' FROM FILE HCAPLUS

=> D IALL ABEQ TECH 1-2;D IBIB ED ABS 3

L70  ANSWER 1 OF 3  WPIX COPYRIGHT 2007       THE THOMSON CORP on STN DUPLICATE
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ACCESSION NUMBER:    2005-333250 [34]   WPIX
DOC. NO. CPI:        C2005-103557 [34]
TITLE:               Preparation of 1,1,1,3,3-pentafluoropropane and
                     1,1,1,3,3,3-hexafluoropropane useful as blowing agent and
                     refrigerant comprises reaction of hydrogen fluoride with
                     halopropene in presence of fluorination catalyst followed
                     by hydrogen
DERWENT CLASS:       A60; E16; G04; J04; J07; K01
INVENTOR:            RAO V N M; SIEVERT A C; RAO V
                     ; SIEVERT A
PATENT ASSIGNEE:     (DUPO-C) DU PONT DE NEMOURS & CO E I
COUNTRY COUNT:       107

PATENT INFORMATION:
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PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005037744	A1	20050428	(200534)*	EN	22[0]	
EP 1673326	A1	20060628	(200643)	EN		
AU 2004281282	A1	20050428	(200674)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005037744	A1	WO 2004-US34455	20041013
EP 1673326	A1	EP 2004-795597	20041013
EP 1673326	A1	WO 2004-US34455	20041013
AU 2004281282	A1	AU 2004-281282	20041013

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1673326	A1	Based on	WO 2005037744	A
AU 2004281282	A1	Based on	WO 2005037744	A

PRIORITY APPLN. INFO: US 2003-511354P 20031014

INT. PATENT CLASSIF.:

IPC ORIGINAL: C07C0017-20 [I,A]; C07C0017-21 [I,A]; C07C0017-23 [I,A]; C07C0019-08 [I,A]

IPC RECLASSIF.: B01J0023-00 [I,A]; B01J0023-00 [I,C]; B01J0023-16 [I,C]; B01J0023-26 [I,A]; B01J0027-06 [I,C]; B01J0027-12 [I,A]; B01J0037-00 [I,C]; B01J0037-26 [I,A]; C07C0017-00 [I,C]; C07C0017-20 [I,A]; C07C0017-21 [I,A]; C07C0017-23 [I,A]; C07C0019-00 [I,C]; C07C0019-08 [I,A]

BASIC ABSTRACT:

WO 2005037744 A1 UPAB: 20051222

NOVELTY - Preparation of 1,1,1,3,3-pentafluoropropane (A1) and 1,1,1,3,3,3-hexafluoropropane (B1) involves reacting hydrogen fluoride (HF) and at least one halopropene in presence of fluorination catalyst to produce 2-chloro-1,1,3,3,3-pentafluoropropene (A2) and 2-chloro-1,1,1,3,3,3-hexafluoropropane (B2); and reacting (A2) and (B2) with hydrogen.

DETAILED DESCRIPTION - Preparation of 1,1,1,3,3-pentafluoropropane (A1) and 1,1,1,3,3,3-hexafluoropropane (B1) comprises:

(a) reacting hydrogen fluoride (HF) and at least one halopropene of formula CX3CCl=CClX in the presence of fluorination catalyst to produce 2-chloro-1,1,3,3,3-pentafluoropropene (A2) and 2-chloro-1,1,1,3,3,3-hexafluoropropane (B2);

(b) reacting (A2) and (B2) produced in step (A) with hydrogen to produce (A1) and (B1); and

(c) recovering (A1) and (B1) produced in step (B). The fluorination catalyst is selected from composition (C1) comprising **zinc chromite** (**ZnCr2O4**) and crystalline alpha-chromium oxide (alpha-Cr2O3), composition (C2) comprising zinc halide and alpha-chromium oxide, composition (C3) comprising (C1) treated with fluorinating agent and composition (C4) comprising (C2) treated with the fluorinating agent.

X = F or Cl

USE - For preparation of 1,1,1,3,3-pentafluoropropane (HFC-245fa) and 1,1,1,3,3,3-hexafluoropropane (HFC-236fa) (claimed) useful as blowing agent, fire extinguishant and refrigerant.

ADVANTAGE - The method produces halogenated hydrocarbons containing no chlorine, having lower ozone depletion potential and can serve as effective replacement for dichlorodifluoromethane in refrigeration systems.

MANUAL CODE: CPI: A08-B04A; E10-H03A3; G04-B01; J04-E01; J07-A08; K01-A; N03-D01; N03-F

TECH

INORGANIC CHEMISTRY - Preferred Components: The ZnCr2O4 contains (atom%): chromium (10-67) and zinc (at least 70). In (C1) and (C3), at least 90 atom% of the chromium is present as chromium oxide. The zinc relative to the total chromium and zinc in (C1) and (C3) is present in an amount of 1-25 atom%. The zinc relative to the total chromium and zinc in (C2) and (C4) is present in an amount of 0.1-25 (preferably 2-10) atom%.

L70 ANSWER 2 OF 3 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN DUPLICATE 2

ACCESSION NUMBER: 2005-333228 [34] WPIX

DOC. NO. CPI: C2005-103545 [34]

TITLE: Chromium containing catalyst composition useful for changing fluorine distribution in halogenated hydrocarbon or incorporating fluorine in saturated or unsaturated hydrocarbon comprises **zinc chromite** and crystalline alpha-chromium oxide

DERWENT CLASS: E19; J04

INVENTOR: **AMOS T; AMOS T G; RAO V; RAO V N M; SIEVERT A; SIEVERT A C; SUBRAMONEY S**; MALLIKARJUNA V N

PATENT ASSIGNEE: (DUPO-C) DU PONT DE NEMOURS & CO E I; (AMOS-I) AMOS T G; (MALL-I) MALLIKARJUNA V N; (SIEV-I) SIEVERT A C; (SUBR-I) SUBRAMONEY S

COUNTRY COUNT: 107

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005037431	A1	20050428	(200534)*	EN	31[2]	
EP 1673165	A1	20060628	(200643)	EN		
AU 2004281816	A1	20050428	(200681)	EN		
US 20070004585	A1	20070104	(200703)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005037431	A1	WO 2004-US34446	20041013
AU 2004281816	A1	AU 2004-281816	20041013
EP 1673165	A1	EP 2004-795588	20041013
EP 1673165	A1	WO 2004-US34446	20041013
US 20070004585	A1 Provisional	US 2003-511353P	20031014
US 20070004585	A1	WO 2004-US34446	20041013
US 20070004585	A1	US 2006-572628	20060317

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1673165	A1	Based on	WO 2005037431	A
AU 2004281816	A1	Based on	WO 2005037431	A

PRIORITY APPLN. INFO: US 2003-511353P 20031014
US 2006-572628 20060317

INT. PATENT CLASSIF.:

IPC ORIGINAL: B01J0023-00 [I,A]; B01J0023-26 [I,A]; B01J0023-86 [I,A];

IPC RECLASSIF.: B01J0023-86 [I,A]; B01J0035-00 [I,A]; B01J0037-03 [I,A]; C07C0017-00 [I,A]; C07C0017-25 [I,A]; C07C0017-37 [I,A]; B01J0021-00 [I,A]
B01J0023-00 [I,A]; B01J0023-00 [I,C]; B01J0023-16 [I,C]; B01J0023-26 [I,A]; B01J0023-76 [I,C]; B01J0023-86 [I,A]; B01J0035-00 [I,A]; B01J0035-00 [I,C]; B01J0037-00 [I,C]; B01J0037-03 [I,A]; C07C0017-00 [I,A]; C07C0017-00 [I,C]; C07C0017-25 [I,A]; C07C0017-37 [I,A]

BASIC ABSTRACT:

WO 2005037431 A1 UPAB: 20051222

NOVELTY - A chromium containing catalyst composition (C1) comprises **zinc chromite (ZnCr2O4)** and crystalline alpha-chromium oxide. The ZnCr2O4 contains (atom %): chromium (10 - 67) and zinc (at least 70). The 90 atom % of the chromium is present as chromium oxide.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) a chromium containing catalyst composition (C2) prepared by treatment of (C1) with a fluorinating agent (preferably anhydrous hydrogen fluoride);

(b) changing (M1) the fluorine distribution in a halogenated hydrocarbon or incorporating fluorine in optionally saturated hydrocarbon in the presence of (C1) or (C2) as a catalyst; and

(c) preparation (M2) of (C1) involving co-precipitating a solid by adding ammonium hydroxide to an aqueous solution of a soluble zinc salt and a soluble trivalent chromium salt containing at least 3 moles of nitrate per mole of chromium in the solution and has a zinc concentration of 5 - 25 mole.% and where at least 3 moles of ammonium per mole of chromium in the solution has been added to the solution; collecting the co-precipitated solid formed; drying the collected solid; and then calcining the dried solid.

USE - For changing the fluorine distribution in a halogenated hydrocarbon or for incorporating fluorine in a saturated or unsaturated hydrocarbon (claimed). In the preparation of e.g. refrigerants, propellants, blowing agents and fire extinguishants.

ADVANTAGE - The catalyst composition is effectively changes the fluorine distribution in a halogenated hydrocarbon; and incorporates fluorine in a saturated or unsaturated hydrocarbon. MANUAL CODE: CPI: E10-H03; E35-C; E35-P; J04-E01; J04-E04; N03-D01; N03-F

TECH

INORGANIC CHEMISTRY - Preferred Composition: The ZnCr2O4 comprises (atom %): chromium (20 - 50) and zinc (at least 90). In the composition greater than 95% of the chromium that is not present as **zinc chromite** is present as crystalline alpha-chromium oxide.

Preferred Method: The fluorine content of a halogenated hydrocarbon compound or an unsaturated hydrocarbon compound is increased by reacting the compound with hydrogen fluoride (HF) or HF and chlorine in the vapor phase in the presence of (C1) or (C2). The fluorine distribution in halogenated hydrocarbon compound is changed by isomerizing or disproportionating the halogenated hydrocarbon compound in vapor phase in the presence of (C1) or (C2). The fluorine content of a halogenated hydrocarbon is decreased by dehydrofluorinating or reacting the compound with hydrogen chloride in the presence of (C1) or (C2). In (M2), ZnCr2O4 is formed in the calcining step.

L70 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:371188 HCAPLUS Full-text
DOCUMENT NUMBER: 142:413307

TITLE: Process for the catalytic preparation of 1,1,1,3,3-pentafluoropropane and 1,1,1,2,3-pentafluoropropane

INVENTOR(S): **Rao, Velliyur Nott Mallikarjuna; Sievert, Allen Capron**

PATENT ASSIGNEE(S): E.I. Dupont De Nemours and Company, USA

SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037743	A1	20050428	WO 2004-US34454	20041013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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AU 2004281281	A1	20050428	AU 2004-281281	20041013
CA 2539936	A1	20050428	CA 2004-2539936	20041013
EP 1673325	A1	20060628	EP 2004-795596	20041013
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1867529	A	20061122	CN 2004-80030175	20041013
US 2006217578	A1	20060928	US 2006-572626	20060317
PRIORITY APPLN. INFO.:			US 2003-511284P	P 20031014
			WO 2004-US34454	W 20041013

OTHER SOURCE(S): CASREACT 142:413307; MARPAT 142:413307

ED Entered STN: 29 Apr 2005

AB A process for the catalytic preparation of 1,1,1,3,3-pentafluoropropane and 1,1,1,2,3-pentafluoropropane is described.

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               L55 OR L56)


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http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf


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    PLEASE SEE
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

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L65 (     14553)SEA FILE=WPIX ABB=ON  PLU=ON  L64 OR L59
L66 (        21)SEA FILE=WPIX ABB=ON  PLU=ON  L62 AND CATAL?/BI,ABEX
L67 (         3)SEA FILE=WPIX ABB=ON  PLU=ON  L62 AND L65
L68 (        20)SEA FILE=WPIX ABB=ON  PLU=ON  L66 AND (PY<=2003 OR AY<=2003 OR
                PRY<=2003)
L69          20 SEA FILE=WPIX ABB=ON  PLU=ON  (L67 OR L68)


=> S L69 NOT L16
L71          18 L69 NOT L16

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=> S (L37 OR L57) NOT L7
L72          5 (L37 OR L57) NOT L7

=> DUP REM L71 L72
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PROCESSING COMPLETED FOR L71
PROCESSING COMPLETED FOR L72
L73          22 DUP REM L71 L72 (1 DUPLICATE REMOVED)
                ANSWERS '1-18' FROM FILE WPIX
                ANSWERS '19-22' FROM FILE HCAPLUS
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=> D IALL ABEQ TECH 1-18;D IBIB ED ABS 19-22

L73  ANSWER 1 OF 22  WPIX COPYRIGHT 2007        THE THOMSON CORP on STN
     DUPLICATE 1
ACCESSION NUMBER:    1994-273574 [34]  WPIX
DOC. NO. CPI:        C1994-125000 [34]
TITLE:               Production of fluoro-aromatic cpds.  - by contacting corresp.
                     chloro-aromatic cpd with hydrogen
                     fluoride in vapour phase in the presence of
                     Zinc-promoted fluorination catalyst

DERWENT CLASS:       C03
INVENTOR:            RAMSBOTTOM J G; SCOTT J D
PATENT ASSIGNEE:     (ICIL-C) IMPERIAL CHEM IND PLC; (ZENE-C) ZENECA LTD
COUNTRY COUNT:       1

PATENT INFORMATION:

PATENT NO            KIND  DATE      WEEK     LA  PG     MAIN IPC
-------------------------------------------------------------------
GB 2275924           A     19940914  (199434)*  EN  10[0]  C07C017-20  <--
GB 2275924           B     19961218  (199703)   EN            C07C017-20  <--

APPLICATION DETAILS:

PATENT NO            KIND  APPLICATION      DATE
-------------------------------------------------------------------
GB 2275924 A                GB 1994-3524     19940224
GB 2275924 B                GB 1994-3524     19940224

PRIORITY APPLN. INFO: GB 1993-4650 19930308
INT. PATENT CLASSIF.:
 IPC RECLASSIF.:     C07C0017-00 [I,C]; C07C0017-20 [I,A]
BASIC ABSTRACT:
        GB 2275924 A  UPAB: 20050509
        Production of fluoroaromatic cpds. having one or more fluorine atoms
     substd. in the aromatic nucleus comprises contacting a chloroaromatic cpd.
     having one or more chlorine atoms substd. in the aromatic nucleus, with
     hydrogen fluoride, in the vapour phase and in the presence of a zinc-promoted
     fluorination catalyst.
        USE/ADVANTAGE - The prods. of the above process are useful as
     intermediates in mfr. of agrochemicals such as herbicides and pesticides. The
     process does not require diazotisation reactions or formation of fluoroformate
     esters. - The process is carried out at 300-400 deg.C and 5-15 bar. The amount of
     hydrogen fluoride is up to 10 moles per mols of starting material. The starting
     material is diluted with an inert gas. The starting material is especially a
     chlorobenzene. Unreacted starting materials are recycled. The catalyst is a
     chromium-containing catalyst. - In an example, a zinc-promoted chromia (zinc
     chromite) catalyst (10g) containing 8 weight% of zinc was charged to a u-tube
     reactor and dried for 60 mins. HF was red to the reactor at 60 ml/min. to
     prefluorinate the catalyst at 300 deg.C. A nitrogen flow of 100 ml/min. was added
     to the reactor. The catalyst was prefluorinated for 16 hrs. A monochlorobenzene-
     saturated nitrogen feed (20 ml/min.) was mixed with the HF feed and passed to the
     reactor system. The reaction prods were passed to a 21 batch scrubber containing
     potassium carbonate. After about one hr. of operation the reactor off-gas was
     diverted to a sample vessel for collection and analysis. Chlorobenzene conversion
     was found to be approx. 6.8%. fluorobenzene yield was approx. 4.6%. A minor amount
     of benzene and traces of dihalobenzenes were discovered in the prod. MANUAL CODE:
     CPI: C10-H02A; N03-D01; N03-F

L73  ANSWER 2 OF 22  WPIX COPYRIGHT 2007        THE THOMSON CORP on STN
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ACCESSION NUMBER: 2005-442660 [45] WPIX
DOC. NO. CPI: C2005-135537 [45]
DOC. NO. NON-CPI: N2005-359568 [45]
TITLE: Stable carbonous **catalyst** particles for, e.g. syn-gas reactions in ebullated/fluidized bed reactors for producing alcohol products, comprises active inorganic **catalytic** powder and carbonaceous liquid binder material
DERWENT CLASS: A81; H04; J04; P73
INVENTOR: COMOLLI A G; GANGULI P S
PATENT ASSIGNEE: (HYDR-N) HYDROCARBON TECHNOLOGIES INC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 6906000	B1	20050614	(200545)*	EN	14[5]	B01J021-18

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6906000	B1	**US 2001-14955**	**20011211**

PRIORITY APPLN. INFO: **US 2001-14955 20011211**
INT. PATENT CLASSIF.:
MAIN: B01J021-18
SECONDARY: B01J023-00; B01J023-48; B01J031-00; B32B015-02
BASIC ABSTRACT:
US 6906000 B1 UPAB: 20051222
NOVELTY - Stable carbonous **catalyst** particles comprises active inorganic **catalytic** powder and carbonaceous liquid binder material that are mixed together, carbonized, and partially oxidized at elevated temperature to form a basic inner porous carbon coating.
DETAILED DESCRIPTION - Stable carbonous **catalyst** particles comprises active inorganic **catalytic** powder and carbonaceous liquid binder material that are mixed together, carbonized, and partially oxidized at elevated temperature to form a basic inner porous carbon coating bonding together the inorganic **catalytic** powder and providing a uniform composition and structure having increased particle strength and surface area. The **catalyst** particles have total carbon content of 2-25 weight%, 1.0-5.0 pound (lb)/mm crush strength, 50-300 m2/g surface area, and 0.02-0.100 inch diameter particle size.
An INDEPENEDENT CLAIM is also included for a method for making stable carbonous **catalyst** particles containing an inorganic **catalytic** powder and a porous carbonized binder material comprising providing an inorganic **catalytic** powder and mixing the powder with carbonaceous liquid binder material having molecular weight of 200-700, and forming uniform powder-liquid binder mixture having a paste consistency; forming the powder-liquid binder mixture into shaped soft stable **catalyst** particles having 0.02-0.100 inch diameter; heating and first carbonizing the carbonaceous liquid binder material by heating the shaped soft **catalyst** particles to 800-1400degreesF temperature in an inert atmosphere for 1-4 hours and converting the carbonaceous liquid binder to a porous graphite form and basic inner carbon coating the **catalytic** powder in the shaped carbon-coated particles; and partially oxidizing the carbon-coated particles at 700-1000degreesF temperature in a flow of inert gas containing 0.1-5 volume% concentration oxygen atmosphere for 1-4 hours and forming micropores on the graphite surface of the stable carbonous carbon-coated **catalyst** particles.

USE - For used in, e.g. syn-gas reactions in ebullated/fluidized bed reactors for producing alcohol products and Fischer-Tropsch synthesis liquid products.
ADVANTAGE - The invention provides improved crush strength and attrition resistance.
DESCRIPTION OF DRAWINGS - The figure is a general process flowsheet utilizing downflow fixed bed or upflow ebullated bed type **catalytic** reactor for **catalytic** reaction processes, such as for syngas feedstream conversions for producing alcohols and Fischer-Tropsch liquid products.
Resulting feedstream (15)
Combined stream (17)
Catalytic reactor (20)
Effluent stream (21)
Hot phase separator (22)
Distillation section (28)
MANUAL CODE: CPI: A10-E05B; A10-E11; A11-B05; A12-W11K; H04-E04; H04-E05; H04-F02E; H04-F05; J04-E04
TECH
INORGANIC CHEMISTRY - Preferred Component: The inorganic **catalytic** powder includes **zinc chromite**, cesium-promoted **zinc chromite**, copper-promoted **zinc chromite**, and potassium- and manganese-promoted zirconia powder.
ORGANIC CHEMISTRY - Preferred Component: The inorganic **catalytic** powder includes **zinc chromite**, cesium-promoted **zinc chromite**, copper-promoted **zinc chromite**, and potassium- and manganese-promoted zirconia powder.
POLYMERS - Preferred Component: The carbonaceous liquid binder materials include partially polymerized furfuryl alcohol, furfuryl alcohol resins, polyvinyl acetate, polyvinyl butates, polyvinyl chlorides, coal-derived hydrocarbon liquid, or waxes from Fischer-Tropsch synthesis process. The basic inner carbon coating includes micropores created in the basic carbon coating by carbonization in an inert atmosphere at 800-1400degreesF temperature for 24 hours, and partial oxidization at 700-1000degreesF temperature for 24 hours for creating the micropores in the basic carbon coating. The basic inner carbon-coated **catalyst** particles have a porous outer secondary carbon-coating layer carbonized and partially oxidized after a second application of carbonaceous liquid binder material.
Preferred Process: The production of carbonous **catalyst** particles further includes providing outer carbon coating(s) by applying an outer coating of the carbonaceous liquid binder to the basic shaped inner carbon-coated particles, carbonizing the outer coating of the carbonaceous liquid binder at 800-1400degreesF temperature for 1-4 hours, partially oxidizing the carbon-coated particles to provide the outer porous carbon coating layer, partially oxidizing the basic inner and outer carbon coating layer at 700-1000degreesF temperature for 2-4 hours and forming micropores in the basic and outer carbon coatings, providing a subsequent outer carbon coating on the basic inner carbon-coated particles by further contacting the particles with a carbonaceous liquid binder then carbonizing the outer liquid binder at 800-1400degreesF temperature, and heating and partially oxidizing the carbonous particles and providing an outer porous carbon coating layer on the shaped basic inner carbon-coated particles. The outer coating of the carbonaceous liquid binder is applied to the shaped soft **catalyst** particles before the first carbonizing step.
Preferred Property: The inorganic **catalytic** powder has size smaller than 200-mesh. The carbonaceous liquid binder materials have molecular weight of 200-700. The **catalyst** particle crush strength is 1.44.5 lb/mm. The particles have an extrudate shape and 0.025-0.075 inch diameter.

L73 ANSWER 3 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-755518 [77] WPIX
DOC. NO. CPI: C2005-230437 [77]
TITLE: Two-stage method for preparing n-methylaniline
DERWENT CLASS: E14; J04
INVENTOR: BELYAKOV N G; GORBUNOV B N; KOSMYNINA G V; MERKIN A A; NIKOLAEV YU T; SHARKINA V I; SOBOLEVSKII V S; UTROBIN A N
PATENT ASSIGNEE: (PIGM-R) PIGMENT STOCK CO
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
RU 2263107	C2	20051027	(200577)*	RU	[0]	C07C211-48

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RU 2263107	C2	**RU 2003-131054**	**20031022**

PRIORITY APPLN. INFO: **RU 2003-131054 20031022**
INT. PATENT CLASSIF.:
MAIN: C07C211-48
SECONDARY: C07C209-26

BASIC ABSTRACT:
RU 2263107 C2 UPAB: 20060125
NOVELTY - Invention relates to the improved method for preparing N-methylaniline from nitrobenzene, methanol and hydrogen in gaseous phase on a copper-containing **catalyst** comprising zinc and chrome compounds.
DETAILED DESCRIPTION - The process is carried for two stages in two in-line connected contact reactors and nitrobenzene and methanol or their mixture are fed into each reactor: nitrobenzene is fed into the first reactor and methanol - into the second reactor using in layers charging the **catalyst** in the first contact reactor and forming 'frontal layer' wherein temperature must not exceed 350degreesC and volume is 10-50% of the total volume of **catalyst** used in this contact reactor. The preferable mole ratio nitrobenzene : methanol : hydrogen = 1:3:15, respectively. The separate feeding of reagents is possible. For example, all nitrobenzene is fed into the first contact reactor and feeding methanol is carried out into the first and the second contact reactors in the mole ratio 1:2 or 2:1, or all nitrobenzene is fed into the first contact reactor and methanol is fed into the second contact reactor in the amount 1.5 mole per a mole of nitrobenzene. As a rule, 50-70% of all nitrobenzene used is fed into the first contact reactor and 30-50% is fed into the second reactor. In both contact reactor a copper-containing **catalyst** of the following composition is used mainly, weight-%: copper oxide, 37-40; chrome oxide 18-20; zinc oxide, 20, and aluminum oxide, the balance, or in both contact reactors a copper-containing **catalyst** of the following composition is used, weight-%: copper oxide, 21.4-26.4; chrome oxide, 3.4-5.8; aluminum oxide, 3.3-22.3; binary copper and **zinc chromite** of empirical formula: ZnxCuyCr2O4 wherein x = 0.8-10; y = 0.4-0.9, 54.5-71.9. Usually, aluminum oxide granules impregnated with copper, chrome and zinc salts in the ratio of active components = 2:1:1, respectively, are used in upper part of the first contact reactor.
USE - Organic chemistry, chemical technology.
ADVANTAGE - Improved preparing method.8 cl, 8 ex MANUAL CODE:
CPI: E10-B04A1; J04-E01

L73 ANSWER 4 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-298069 [29] WPIX
DOC. NO. CPI: C2003-077514 [29]
TITLE: Hydrotreating process for converting hydrocarbons to olefins and aromatic hydrocarbons involves contacting hydrocarbon fluid with **catalyst** produced by contacting an acid-leached ZSM-5 zeolite with a phosphorus compound
DERWENT CLASS: A41; E19; H04
INVENTOR: YAO J
PATENT ASSIGNEE: (PHIP-C) PHILLIPS PETROLEUM CO
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 6417421	B1	20020709	(200329)*	EN	8[0]	C07C005-22

<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6417421	B1	**US 1998-34051**	**19980303**
US 6417421	B1 CIP of	**US 2000-558126**	**20000425**

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6417421 B1	CIP of	US 6074975 A

PRIORITY APPLN. INFO: **US 2000-558126 20000425**
US 1998-34051 19980303

INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0023-06 [N,A]; B01J0023-06 [N,C]; B01J0029-00 [I,C]; B01J0029-40 [I,A]; B01J0037-00 [I,C]; B01J0037-28 [I,A]

BASIC ABSTRACT:
US 6417421 B1 UPAB: 20060119
NOVELTY - A hydrotreating process involves contacting a fluid which comprises a hydrocarbon with a **catalyst** under predetermined conditions to convert the hydrocarbon to olefins and 6-8C aromatic hydrocarbons. The **catalyst** is produced by contacting an acid-leached ZSM-5 zeolite with a phosphorus compound,
DETAILED DESCRIPTION - A hydrotreating process involves contacting a fluid which comprises a hydrocarbon with a **catalyst** under predetermined conditions to convert the hydrocarbon to an olefin and a 6-8C aromatic hydrocarbon. The **catalyst** is produced by:
(i) contacting an acid-leached ZSM-5 zeolite with a phosphorus compound such as, phosphorus oxide, phosphorus pentoxide, phosphorus oxychloride, phosphoric acid, phosphines, phosphites and/or phosphates, to incorporate the phosphorus compound into the acid leached ZSM-5;
(ii) contacting the first promoted ZSM-5 with a second promoter which is a zinc compound, such as zinc nitrate, zinc titanate, zinc silicate, zinc borate, zinc fluorosilicate, zinc fluorotitanate, zinc molybdate, zinc chromate, zinc tungstate, zinc zirconate, **zinc chromite**, zinc aluminate, zinc tungstate, zinc zirconate, **zinc chromite**, zinc aluminate, zinc phosphate, zinc phosphate, zinc acetate dihydrate, diethylzinc and/or zinc 2-ethylhexanoate; and
(iii) heat-treating the second promoted ZSM-5.

The acid-leached ZSM-5 has been previously suspended in an acid solution in amount 0.01-700 grams per liter. The solution has an initial pH lower than 6 and is subjected to a treatment at 70-120 degrees C for 30 minutes to 20 hours under 1 atmosphere pressure.

USE - Converting hydrocarbons to olefins and 6-8C aromatic hydrocarbons.

ADVANTAGE - The **catalyst** composition enhances the production of olefins and benzene, toluene and xylene (BTX). It provides an increased total weight percent of ethylene, propylene and 6-8C aromatic hydrocarbons compared to (i) a **catalyst** comprising ZSM-5 and only P, (ii) a **catalyst** comprising ZSM-5 and only Zn or (iii) a **catalyst** comprising ZSM-5 and Zn+P prepared by adding Zn then P.

MANUAL CODE: CPI: A01-D13; E10-J02B3; E10-J02C3; E11-E; H04-A07; H04-F02A; N06-B; N07-C

TECH

CHEMICAL ENGINEERING - Preferred Materials: The fluid can be gasoline from **catalytic** oil cracking processes, pyrolysis gasoline from thermal cracking of saturated hydrocarbons, naphthas, gas oils and/or reformates, preferably naphtha. The ZSM-5 is washed, dried and calcined after the treatment.

Preferred Process: The condition comprises a weight hourly space velocity of the fluid at 0.01-100 g feed/g **catalyst**/hour, under 0-1000 psig, and at 250-1000 degrees C.

L73 ANSWER 5 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-474857 [41] WPIX
CROSS REFERENCE: 1999-214119; 1999-214120; 1999-311583; 1999-326416; 2000-430053; 2001-528507
DOC. NO. CPI: C2000-142223 [41]
TITLE: Preparation of **catalyst** composition e.g. for polymers, by combining ZSM-5 zeolite, clay, and zinc compound, steaming, contacting with phosphorous compound and calcining
DERWENT CLASS: A41; E19; H04
INVENTOR: DRAKE C A; WU A; YAO J
PATENT ASSIGNEE: (PHIP-C) PHILLIPS PETROLEUM CO
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
US 6083865	A	20000704	(200041)*	EN	9[0]	B01J029-06	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6083865	A	**US 1997-890540**	**19970709**
US 6083865	A CIP of	**US 1997-919987**	**19970828**
US 6083865	A Div Ex	**US 1998-172642**	**19981014**

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6083865 A	CIP of	US 5883033 A
US 6083865 A	Div ex	US 5898089 A

PRIORITY APPLN. INFO: **US 1998-172642 19981014**
US 1997-890540 19970709

US 1997-919987 19970828

INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0029-00 [I,C]; B01J0029-06 [I,A]; B01J0029-40 [I,A]; C10G0035-00 [I,C]; C10G0035-095 [I,A]; C10G0045-58 [I,C]; C10G0045-64 [I,A]; C10G0045-68 [I,A]; C10G0047-00 [I,C]; C10G0047-16 [I,A]

BASIC ABSTRACT:

US 6083865 A UPAB: 20060116

NOVELTY - Process for converting hydrocarbons to more valuable olefins and BTX and for reducing coke deposition.

DETAILED DESCRIPTION - The process comprises:

(1) combining a ZSM-5 zeolite, a clay, and a zinc compound under a condition sufficient to produce a clay-bound zeolite;

(2) steaming the clay-bound zeolite to produce a modified zeolite;

(3) contacting the modified zeolite with a phosphorus compound under a condition sufficient to incorporate the phosphorus compound into the modified zeolite to produce a Zn- and P-containing zeolite; and

(4) calcining the zinc- and phosphorus-containing zeolite, where the zinc compound is selected from zinc titanate, zinc silicate, zinc borate, zinc fluorosilicate, zinc fluorotitanate, zinc molybdate, zinc chromate, zinc tungstate, zinc zirconate, **zinc chromite** , zinc aluminate, zinc phosphate, zinc acetate dehydrate, diethylzinc, zinc 2-ethylhexanoate, and combinations of two or more of these, and the phosphorus compound is selected from phosphorus pentoxides, phosphorus oxychloride, phosphoric acid, phosphines, phosphites, phosphates, and combinations of two or more of these.

An INDEPENDENT CLAIM is also included for the zeolite composition as used above.

USE - Used in petrochemical industry for use as feedstocks for producing organic compounds and olefins.

ADVANTAGE - The **catalyst** enhances the ratio of produced olefins to benzene, toluene and xylene (BTX), and also suppresses the deposition of coke during a hydrotreatment process. MANUAL CODE: CPI: A01-D13; E05-L03C; E10-J02B3; E10-J02C3; E31-K05B; E31-K07; E35-C; E35-K04; H04-E; H04-F02E; N01-D02; N03-B02; N03-F; N04-B; N05-E01; N06-B

TECH

ORGANIC CHEMISTRY - Preferred Amounts: The weight ratio of clay to zeolite is 1:7 - 5:1 and the weight ratio of promoter to zeolite is 0.04:1 - 0.5:1.

The zinc compound is zinc silicate and the phosphorus compound is triethyl phosphate.

The composition comprises zinc silicate and triethyl phosphate, the weight ratio of clay to zeolite being 15 - 1:20 to 20:1 and the weight ratio of promoter to zeolite being 0.01:1 to 1:1.

The weight ratio of clay to zeolite is 1:7 - 5:1 and the weight ratio of promoter to zeolite is 0.04:1 - 0.5:1.

L73 ANSWER 6 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 2000-422401 [36] WPIX
DOC. NO. CPI: C2000-127672 [36]
TITLE: Process for preparing a ZSM-5 based **catalyst** for the conversion of hydrocarbons to aromatics such as toluene, xylenes, etc.,
DERWENT CLASS: A41; E14; E17; H04
INVENTOR: DRAKE C A; YAO J
PATENT ASSIGNEE: (PHIP-C) PHILLIPS PETROLEUM CO
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
US 6074975	A	20000613	(200036)*	EN	12[0]	B01J029-04	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6074975	A	US 1998-34051	19980303

PRIORITY APPLN. INFO: US 1998-34051 19980303

INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0023-06 [N,A]; B01J0023-06 [N,C]; B01J0029-00 [I,C]; B01J0029-40 [I,A]; B01J0037-00 [I,C]; B01J0037-28 [I,A]

BASIC ABSTRACT:

US 6074975 A UPAB: 20060116

NOVELTY - Process for making a novel ZSM-5 based hydrocarbon conversion **catalyst** is new.

DETAILED DESCRIPTION - A process for making the composition comprises:

(a) contacting an acid-leeched ZSM-5 with a phosphorus-based promotor selected from phosphorus oxide, phosphorus pentoxides, phosphorus oxychloride, phosphoric acid, phosphines, phosphates and/or phosphates

(b) contacting the promoted ZSM-5 with a second zinc-based promoter selected from zinc nitrate, zinc titanate, zinc silicate, zinc borate, zinc fluorosilicate, zinc fluorotitanate, zinc molybdate, zinc chromate, zinc tungstate, zinc zirconate, **zinc chromite** , zinc aluminate, zinc phosphate, zinc acetate dihydrate, diethylzinc and/or zinc 2-ethylhexanoate; and

(c) heat-treating the second promoted ZSM-5 to give the desired composition.

The concentration of the ZSM-5 solution is 0.01-700 g/l with an initial pH of 6 or lower, with the solution initially being subjected to a temperature of 70-120degreesC for 30 minutes to 20 hours at atmospheric pressure.

USE - For converting a hydrocarbons to a 6-8C aromatics and an olefins.

ADVANTAGE - The **catalyst** is efficient at converting hydrocarbons to more valuable olefins and BTX (benzene, toluene and xylenes).

MANUAL CODE: CPI: A01-D13; E05-G02; E05-G03B; E05-G08; E05-G09B; E05-G09C; E05-L03C; E05-L03D; E10-J02B3; E10-J02C3; E31-C; E31-K07; E31-Q07; E35; E35-C; H04-E01; H04-F02E

TECH

INORGANIC CHEMISTRY - Preferred Process: The ZSM-5 was washed, dried, and calcined after the treatment.

L73 ANSWER 7 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 1999-468994 [39] WPIX

CROSS REFERENCE: 1999-430631; 1999-430632; 1999-430633; 2000-292495; 2000-292496; 2000-292497; 2000-292498; 2000-292499; 2000-292500; 2000-466014; 2002-487894

DOC. NO. CPI: C1999-137579 [39]

DOC. NO. NON-CPI: N1999-350200 [39]

TITLE: Metal-based, high temperature-resistant anode for aluminum production cells

DERWENT CLASS: A32; A85; M28; X25

INVENTOR: DE NORA V

PATENT ASSIGNEE: (MOLT-N) MOLTECH INVENT SA

COUNTRY COUNT: 51

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
WO 9936591	A1	19990722	(199939)*	EN	25[0]	C25C003-12	<--
AU 9917795	A	19990802	(199954)	EN		C25C003-12	<--
NO 2000003704	A	20000719	(200054)	NO		C25C000-00	<--
EP 1049815	A1	20001108	(200062)	EN		C25C003-12	<--
AU 747906	B	20020530	(200247)	EN			<--
US 6425992	B1	20020730	(200254)	EN		B01D059-40	<--
EP 1049815	B1	20030409	(200325)	EN		C25C003-12	<--
DE 69906697	E	20030515	(200340)	DE			<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9936591	A1	WO 1999-IB79	19990119
AU 9917795	A	AU 1999-17795	19990119
AU 747906	B	AU 1999-17795	19990119
DE 69906697	E	DE 1999-69906697	19990119
EP 1049815	A1	EP 1999-900107	19990119
EP 1049815	B1	EP 1999-900107	19990119
DE 69906697	E	WO 1999-IB79	19990119
NO 2000003704	A	WO 1999-IB79	19990119
EP 1049815	A1	WO 1999-IB79	19990119
US 6425992	B1 Cont of	WO 1999-IB79	19990119
EP 1049815	B1	WO 1999-IB79	19990119
DE 69906697	E	US 2000-616333	20000715
US 6425992	B1	NO 2000-3704	20000719
NO 2000003704	A		

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 747906 B	Previous Publ	AU 9917795 A
DE 69906697 E	Based on	EP 1049815 A
AU 9917795 A	Based on	WO 9936591 A
EP 1049815 A1	Based on	WO 9936591 A
AU 747906 B	Based on	WO 9936591 A
EP 1049815 B1	Based on	WO 9936591 A
DE 69906697 E	Based on	WO 9936591 A

PRIORITY APPLN. INFO: US 1998-126206 19980730
WO 1998-IB81 19980120
US 1998-126359 19980730
WO 1999-IB79 19990119
US 2000-616333 20000715

INT. PATENT CLASSIF.:
MAIN: C25C; C25C003-12
IPC RECLASSIF.: C25C0003-00 [I,C]; C25C0003-12 [I,A]; C25C0007-00 [I,C]; C25C0007-02 [I,A]

BASIC ABSTRACT:

WO 1999036591 A1 UPAB: 20060115

NOVELTY - A non-carbon, metal-based, high temperature resistant, electrically conductive and electrochemically active anode of a cell for the production of aluminum by the electrolysis of alumina dissolved in a fluoride-containing electrolyte is prepared by application of a polymeric and/or colloidal carrier to a substrate.

DETAILED DESCRIPTION - The anode has a metal based oxidation-resistant substrate (A) to which an adherent electrochemically active multilayer coating (B) is applied prior to immersion into the electrolyte and startup of electrolysis by connection to the positive current supply.

The coating (B) is obtained from a number of applied layers selected from: (a) a liquid solution, (b) a dispersion in a liquid or a paste, (c) a suspension in a liquid or a paste, and/or (d) a pasty or non-pasty slurry.

Heat treatment is optionally carried out between two consecutively applied layers.

At least one layer is formed from a polymeric and/or colloidal carrier.

After final heat treatment coating (B) is electrically conductive and has, during operation in the cell, an electrochemically active surface for the oxidation of oxygen ions present at the surface of the anode.

INDEPENDENT CLAIMS are included for:

(i) a method of manufacturing the anode by application of coating (B) onto substrate (A), with optional intermediate heat treatment between applied layers and a final heat treatment;

(ii) a cell for the production of aluminum by electrolysis of alumina dissolved in a fluoride containing electrolyte containing at least one anode; and

(iii) a method for the production of aluminum in the cell containing the anode.

USE - The anode is useful for the electrolysis of alumina, to produce aluminum.

ADVANTAGE - The anode has a long life and high electrochemical activity and is easily prepared.

MANUAL CODE: CPI: A11-B05; A12-E09; M28-B; M28-C01
EPI: X25-R02

Member(0004)

ABEQ EP 1049815 A1 UPAB 20060115

NOVELTY - A non-carbon, metal-based, high temperature resistant, electrically conductive and electrochemically active anode of a cell for the production of aluminum by the electrolysis of alumina dissolved in a fluoride-containing electrolyte is prepared by application of a polymeric and/or colloidal carrier to a substrate.

DETAILED DESCRIPTION - The anode has a metal based oxidation-resistant substrate (A) to which an adherent electrochemically active multilayer coating (B) is applied prior to immersion into the electrolyte and startup of electrolysis by connection to the positive current supply.

The coating (B) is obtained from a number of applied layers selected from: (a) a liquid solution, (b) a dispersion in a liquid or a paste, (c) a suspension in a liquid or a paste, and/or (d) a pasty or non-pasty slurry.

Heat treatment is optionally carried out between two consecutively applied layers.

At least one layer is formed from a polymeric and/or colloidal carrier.

After final heat treatment coating (B) is electrically conductive and has, during operation in the cell, an electrochemically active surface for the oxidation of oxygen ions present at the surface of the anode.

INDEPENDENT CLAIMS are included for:

(i) a method of manufacturing the anode by application of coating (B) onto substrate (A), with optional intermediate heat treatment between applied layers and a final heat treatment;

(ii) a cell for the production of aluminum by electrolysis of alumina dissolved in a fluoride containing electrolyte containing at least one anode; and

(iii) a method for the production of aluminum in the cell containing the anode.

USE - The anode is useful for the electrolysis of alumina, to produce aluminum.

ADVANTAGE - The anode has a long life and high electrochemical

activity and is easily prepared.

TECH

INORGANIC CHEMISTRY - Preferred Composition: (A) is metal, alloy, an intermetallic compound or a cermet, preferably nickel, copper, cobalt, chromium, molybdenum, tantalum and/or iron as the metal and/or oxide in one or more layers.

(A) has a surface pre-coating or pre-impregnation, preferably of ceria.

(B) is an oxide, oxyfluoride, phosphide and/or carbide, preferably containing at least one ferrite or chromite, preferably cobalt, manganese, nickel, magnesium and/or zinc ferrite. The ferrite is doped with at least one oxide consisting of chromium, titanum, tin or zirconium oxide. The ferrite is nickel ferrite, optionally partially substituted with Fe2+.

(B) is a chromite consisting or iron, cobalt, copper, manganese, beryllium, calcium, strontium, barium, magnesium, nickel or zinc chromite.

(B) contains an electro-catalyst for the formation of molecular oxygen from atomic oxygen, consisting of iridium, palladium, platinum, rhodium, ruthenium, silicon, tin or zinc, the lanthanide series, mischmetal or their oxides and/or compounds.

(B) contains one or more dried colloids or polymers consisting of colloidal alumina, silica, yttria, ceria, thoria, zirconia, magnesia, lithia, tin oxide, zinc oxide monoaluminum phosphate or cerium acetate. The colloid or polymer are derived from precursors and reagents which are solutions of at least one salt consisting of a chloride, sulfate, nitrate, chlorate, perchlorate or a metal organic compound, preferably an alkoxide, formate, acetate of aluminum , silicon , yttrium, cerium, thorium, zirconium, magnesium or lithium. Each colloid or polymer precursor or reagent contains a chelating agent such as acetyl acetone or ethyl acetoacetate.

The solutions of metal organic compounds, principally metal alkoxides, are of formula M(OR)z, where M = a metal or complex cation; R= alkyl, and z =1-12.

Preferred Method: At least one layer is applied by painting, spraying, dipping, brush, electroplating or rollers. A solution, dispersion, suspension or slurry is applied in very liquid, liquid, thick and/or pasty form.

(A) is pre-coated or pre-impregnated by painting, spraying, dipping or infiltration with reagents and precursors, gels and/or colloids before application of (B), preferably using a solution containing ceria or a ceria precursor. Several liquid containing layers are applied and allowed to dry at least partially in ambient air or assisted by heating before application of the next layer. (A) is coated with a precursor containing at least one constituent which reacts with (A) to form (B) and the constituent(s) are reacted with (A) to form the coating. A solid applied layer is applied onto (A) by plasma spraying, arc spraying, physical vapor deposition, chemical vapor deposition or calendaring rollers.

The anode may be reconditioned by clearing at least worn and/or damaged parts of the active coating from (A) and then reconstituting at least the electrochemically active coating.

Preferred Electrolysis: The electrolyte is cryolite.

The cell contains an aluminum wettable cathode and is in a drained configuration on which aluminum is produced and continuously drained.

The cell is in a bipolar configuration where the anodes form the anodic side of at least one bipolar electrode and/or a terminal anode.

The cell contains means to circulate the electrolyte between the anodes and facing cathodes and//or means to facilitate dissolution of alumina in the electrolyte.

The electrolyte temperature is 750-970 degrees C.

L73 ANSWER 8 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

ACCESSION NUMBER: 1997-402501 [37] WPIX
DOC. NO. CPI: C1997-129838 [37]
DOC. NO. NON-CPI: N1997-334793 [37]
TITLE: Production of high octane gasoline components from synthesis gas - by **catalytic** conversion using **catalyst** comprising pentasil-type zeolite and zinc-chromium **catalyst** of methanol synthesis

DERWENT CLASS: E14; E17; H04; J04; P84; S06
INVENTOR: FUREN E L; GOROKHOVSKY V A; KASCHITSKY J A; KRUPNIK L I; OKOROKOV V A; RODIONOV V I; ROSTANIN N N; SEDYCH A D
PATENT ASSIGNEE: (FALK-I) FALKEVICH G S; (GORO-I) GOROKHOVSKY V A
COUNTRY COUNT: 19

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
WO 9728108	A1	19970807	(199737)*	RU	11[0]	C07C001-04	<--
RU 2100332	C1	19971227	(199833)	RU	6[0]	C07C001-04	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9728108 A1		**WO 1997-RU16 19970131**	
RU 2100332 C1		**RU 1996-102071 19960201**	

PRIORITY APPLN. INFO: **RU 1996-102071 19960201**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: C07C0001-00 [I,C]; C07C0001-04 [I,A]; C10G0002-00 [I,A]; C10G0002-00 [I,C]

BASIC ABSTRACT:
WO 1997028108 A1 UPAB: 20050703
The method comprises conversion of synthesis gas (H2/CO = 1-12) to mixture of 1-11C hydrocarbons, in which 5C fraction is enriched with isoparaffin hydrocarbons, in particular with isopentane and isohexanes. Process is conducted at 330-400° C, pressure 6-15 MPa, and volumetric rate of supply of starting material 50-11000/hour, using bi-component **catalyst** comprising pentasil-type zeolite and zinc/chromium **catalyst** of methanol synthesis with atomic ratio Zn/(Zn + Cr) = 0.6-0.8, containing 10-50 weight% of zeolite component. To improve results, zeolite component consists of crystalline alumino-silicate, having silica/alumina ratio 25-150, and contains 0.2-0.5 weight% of sodium oxide and 0.1-5 weight% of oxides of rare earth elements, and **catalyst** is activated in reducing medium at temperature not higher than 400° C.
USE - Used in production of high-octane components of engine fuels with low content of aromatic hydrocarbons by **catalytic** conversion of synthesis gas.
ADVANTAGE - The method increases productivity and yield of isoparaffins.

MANUAL CODE: CPI: E10-J02D3; H04-D; H04-E05; H04-F02D; H04-F02E; J04-E01; N03-D01; N03-F; N06-B

Member(0002)
ABEQ RU 2100332 C1 UPAB 20050703
The method comprises conversion of synthesis gas (H2/CO = 1-12) to mixture of 1-11C hydrocarbons, in which 5C fraction is enriched with isoparaffin hydrocarbons, in particular with isopentane and isohexanes. Process is conducted at 330-400° C, pressure 6-15 MPa, and volumetric rate of supply of starting material 50-11000/hour, using bi-component **catalyst** comprising pentasil-type zeolite and zinc/chromium

catalyst of methanol synthesis with atomic ratio Zn/(Zn + Cr) = 0.6-0.8, containing 10-50 wt.% of zeolite component. To improve results, zeolite component consists of crystalline alumino-silicate, having silica/alumina ratio 25-150, and contains 0.2-0.5 wt.% of sodium oxide and 0.1-5 wt.% of oxides of rare earth elements, and **catalyst** is activated in reducing medium at temperature not higher than 400 deg.C.
USE - Used in production of high-octane components of engine fuels with low content of aromatic hydrocarbons by **catalytic** conversion of synthesis gas.
ADVANTAGE - The method increases productivity and yield of isoparaffins.

L73 ANSWER 9 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1997-505175 [47] WPIX
DOC. NO. CPI: C1997-160867 [47]
TITLE: Preparation of hydroxy:methyl:cyclopropane - by hydrogenation of formyl:cyclopropane using copper chromite, **zinc chromite** and/or copper/zinc **catalyst**

DERWENT CLASS: C03
INVENTOR: FELD M; KLEEMISS W
PATENT ASSIGNEE: (DEGS-C) DEGUSSA-HUELS AG; (CHEM-C) HUELS AG
COUNTRY COUNT: 5

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
EP 794166	A2	19970910	(199747)*	DE	4[0]	C07C029-141	<--
DE 19608852	A1	19970911	(199747)	DE	9742	C07C031-133	<--
JP 09328445	A	19971222	(199810)	JA	4[0]	C07C031-133	<--
EP 794166	A3	19971229	(199818)	EN		C07C029-141	<--
US 5767326	A	19980616	(199831)	EN		C07C027-10	<--
EP 794166	B1	19991208	(200002)	DE		C07C029-141	<--
DE 59700811	G	20000113	(200010)	DE		C07C029-141	<--
JP 3522484	B2	20040426	(200428)	JA	4	C07C029-141	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 794166 A2		**EP 1997-100500 19970115**	
DE 19608852 A1		**DE 1996-19608852 19960307**	
DE 59700811 G		**DE 1997-59700811 19970115**	
EP 794166 A3		**EP 1997-100500 19970115**	
EP 794166 B1		**EP 1997-100500 19970115**	
DE 59700811 G		**EP 1997-100500 19970115**	
JP 09328445 A		**JP 1997-46819 19970303**	
JP 3522484 B2		**JP 1997-46819 19970303**	
US 5767326 A		**US 1997-813593 19970307**	

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 59700811 G	Based on	EP 794166 A
JP 3522484 B2	Previous Publ	JP 09328445 A

PRIORITY APPLN. INFO: **DE 1996-19608852 19960307**
INT. PATENT CLASSIF.:

MAIN: C07C029-141
IPC RECLASSIF.: B01J0023-16 [I,C]; B01J0023-26 [I,A]; B01J0023-76 [I,C]; B01J0023-80 [I,A]; B01J0023-86 [I,A]; C07B0061-00 [I,A]; C07B0061-00 [I,C]; C07C0029-00 [I,C]; C07C0029-141 [I,A]; C07C0031-00 [I,C]; C07C0031-133 [I,A]

BASIC ABSTRACT:
EP 794166 A2 UPAB: 20050519
Preparation of hydroxymethylcyclopropane comprises hydrogenation of formylcyclopropane using copper chromite, **zinc chromite** and/or copper/zinc as a **catalyst**. The temperature is kept at 20-250 °C, and the hydrogen pressure is 10-350 bar.
USE - Hydroxymethylcyclopropane is used as an intermediate for the preparation of bactericides, fungicides, herbicides and insecticides.
ADVANTAGE - High yields are obtained, even at relatively low temperatures (when copper chromite is used as a **catalyst**). Alcohol side products are not produced in the reaction, allowing easier work-up.
MANUAL CODE: CPI: C10-E04B; N02-D; N03-D01; N03-F

Member(0003)
ABEQ JP 09328445 A UPAB 20050519
Preparation of hydroxymethylcyclopropane comprises hydrogenation of formylcyclopropane using copper chromite, **zinc chromite** and/or copper/zinc as a **catalyst**. The temperature is kept at 20-250 °C, and the hydrogen pressure is 10-350 bar.
USE - Hydroxymethylcyclopropane is used as an intermediate for the preparation of bactericides, fungicides, herbicides and insecticides.
ADVANTAGE - High yields are obtained, even at relatively low temperatures (when copper chromite is used as a **catalyst**). Alcohol side products are not produced in the reaction, allowing easier work-up.

Member(0005)
ABEQ US 5767326 A UPAB 20050519
Preparation of hydroxymethylcyclopropane comprises hydrogenation of formylcyclopropane using copper chromite, **zinc chromite** and/or copper/zinc as a **catalyst**. The temperature is kept at 20-250 °C, and the hydrogen pressure is 10-350 bar.
USE - Hydroxymethylcyclopropane is used as an intermediate for the preparation of bactericides, fungicides, herbicides and insecticides.
ADVANTAGE - High yields are obtained, even at relatively low temperatures (when copper chromite is used as a **catalyst**). Alcohol side products are not produced in the reaction, allowing easier work-up.

Member(0006)
ABEQ EP 794166 B1 UPAB 20050519
Preparation of hydroxymethylcyclopropane comprises hydrogenation of formylcyclopropane using copper chromite, **zinc chromite** and/or copper/zinc as a **catalyst**. The temperature is kept at 20-250 °C, and the hydrogen pressure is 10-350 bar.
USE - Hydroxymethylcyclopropane is used as an intermediate for the preparation of bactericides, fungicides, herbicides and insecticides.
ADVANTAGE - High yields are obtained, even at relatively low temperatures (when copper chromite is used as a **catalyst**). Alcohol side products are not produced in the reaction, allowing easier work-up.

L73 ANSWER 10 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1997-130675 [12] WPIX
DOC. NO. CPI: C1997-042038 [12]

TITLE: **Catalyst** for conversion of carbon mon:oxide - contains oxide(s) of copper, aluminium and zinc, and double copper-**zinc chromite**
DERWENT CLASS: E36; J01; J04
INVENTOR: SEREGINA L K; SHARKINA V I; SOBOLEVSKII V S
PATENT ASSIGNEE: (SHAR-I) SHARKINA V I
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
SU 1078708	A1	19960810	(199712)*	RU	4[0]	B01J023-86	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
SU 1078708 A1		**SU 1982-3507952**	**19821109**

PRIORITY APPLN. INFO: **SU 1982-3507952 19821109**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0023-76 [I,C]; B01J0023-86 [I,A]; C01B0003-00 [N,C]; C01B0003-16 [N,A]

BASIC ABSTRACT:
SU 1078708 A1 UPAB: 20050519
The **catalyst** is based on oxides of copper, zinc and aluminium, and a chromium cpd., to improve activity and stability and reduce bulk density of the **catalyst**, in the form of double zinc-copper chromite, of empirical formula ZnxCuyCr2O4 (I), where x is 0.8-1.0 and y is 0.4-0.9, in a ratio of components (in weight%) of copper oxide 21.4-26.4, zinc oxide 3.38-5.80, aluminium oxide 3.3-22.3 and (I) 52.92-64.5.
USE - The CO conversion **catalyst** is used in the purificn. of gaseous mixts. containing toxic admixtures.
ADVANTAGE - The **catalyst** has improved activity and stability and reduced bulk density. MANUAL CODE: CPI: E11-Q02; E31-N05B; J01-E02D; J01-E03F; J04-E04; N02-D; N03-D01; N03-F

L73 ANSWER 11 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1994-125208 [15] WPIX
DOC. NO. CPI: C1994-057920 [15]
DOC. NO. NON-CPI: N1994-098132 [15]
TITLE: **Catalyst** for butane fuel oxidation - comprises **zinc chromite** on alumina carrier and has improved heat and wear resistance
DERWENT CLASS: J04; Q73
INVENTOR: ISMAGILOV Z R; KIRICHENKO O A; TSUKAN M P
PATENT ASSIGNEE: (ASIT-C) AS SIBE CATALYSIS INST; (UYNS-C) UNIV NOVOS
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
SU 1503132	A1	19931230	(199415)*	RU	4[0]	B01J023-06	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

SU 1503132 A1 SU 1987-4323850 19871102

PRIORITY APPLN. INFO.: SU 1987-4323850 19871102
INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0023-06 [I,A]; B01J0023-06 [I,C]; B01J0023-16 [I,C]; B01J0023-26 [I,A]; F23Q0002-00 [I,C]; F23Q0002-30 [I,A]

BASIC ABSTRACT:
SU 1503132 A1 UPAB: 20050701
The **catalyst** consists of Zn chromite (15-25 weight%) on an Al203 carrier (75-85 weight%), with the latter being in the form of the gamma- and chi-Al203 types.
The carrier (100g) is impregnated with a Zn dichromate solution (calculated as Zn chromite) at room temperature and with mixing for 45-60 minutes. After drying under IR lamps at 110-140 deg.C, the **catalyst** is fired at 600 deg.C for 4 hours.
USE/ADVANTAGE - Is used to **catalyse** fuel combustion. The heat and wear resistances are increased. MANUAL CODE: CPI: J04-E04; N03-D01; N03-F

L73 ANSWER 12 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1990-307867 [35] WPIX
DOC. NO. CPI: C1990-132860 [21]
TITLE: Preparation of methyl:pyrazine - comprises reaction of propylene with ethylene:di:amine over **zinc-chromite catalyst** and copper-chromite **catalyst**
DERWENT CLASS: E13
PATENT ASSIGNEE: (KANK-N) KANKOKU KAGAKU KENK; (KANK-N) KANKOKU KAGAKU KENKYUSHO; (KORE-N) KOREA RES INST CHEM TECH
COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
JP 02184679	A	19900719	(199035)*	JA			<--
KR 9008170	B	19901105	(199207)	KO			<--
JP 05052829	B	19930806	(199334)	JA	0	C07D241-12	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 02184679 A		JP 1989-194466	19890728
KR 9008170 B		KR 1988-18063	19881231
JP 05052829 B		JP 1989-194466	19890728

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05052829 B	Based on	JP 02184679 A

PRIORITY APPLN. INFO: KR 1988-18063 19881231
INT. PATENT CLASSIF.:
MAIN: C07D241-12
IPC RECLASSIF.: B01J0023-16 [I,C]; B01J0023-26 [I,A]; B01J0023-76 [I,C]; B01J0023-86 [I,A]; C07B0061-00 [I,A]; C07B0061-00 [I,C]; C07D0241-00 [I,C]; C07D0241-12 [I,A]

BASIC ABSTRACT:

JP 02184679 A UPAB: 20050501
Preparation of methylpyrazine (I) comprises (1) Reaction of propylene (II) with equimolar ethylenediamine (III) over zinc-chromic **catalyst** (IV) and copper-chromite **catalyst** (V) successively in presence of hydrogen (and inert gas), and, (2) Separating (I) from the reaction mixture (VI).
ADVANTAGE - (I) is prepared in higher yield selectively than before.. (Provisional Basic previously advised in Week 9035) @(6pp Dwg.No.0/0) MANUAL CODE: CPI: E07-D10; N02-D01; N03-D; N03-F

Member(0003)
ABEQ JP 93052829 B UPAB 20050501
Preparation of methylpyrazine (I) comprises (1) Reaction of propylene (II) with equimolar ethylenediamine (III) over zinc- chromic **catalyst** (IV) and copper-chromite **catalyst** (V) successively in presence of hydrogen (and inert gas), and, (2) Separating (I) from the reaction mixt. (VI).
ADVANTAGE - (I) is prepd. in higher yield selectively than before.

L73 ANSWER 13 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1987-123790 [18] WPIX
DOC. NO. CPI: C1987-051377 [21]
TITLE: Production of cyclopropyl-methanol used as bactericide intermediate - by hydrogenating cyclopropane-carboxylate ester on **zinc chromite catalyst**
DERWENT CLASS: C03; E15
INVENTOR: NEHRING R; OTTE W
PATENT ASSIGNEE: (CHEM-C) HUELS AG
COUNTRY COUNT: 12

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
DE 3538132	A	19870430	(198718)*	DE	3[0]		<--
EP 222988	A	19870527	(198721)	DE	4	C07C031-133	<--
JP 62106033	A	19870516	(198725)	JA			<--
US 4720597	A	19880119	(198805)	EN	2	C07C029-132	<--
EP 222988	B	19880817	(198833)	DE		C07C031-133	<--
DE 3660542	G	19880922	(198839)	DE			<--
ES 2002539	A	19880816	(198927)#	ES			<--
JP 05058609	B	19930827	(199337)	JA	3	C07C031-133	<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3538132 A		DE 1985-3538132	19851026
DE 3660542 G		DE 1985-3538132	19851026
EP 222988 A		EP 1986-111694	19860823
ES 2002539 A		ES 1986-2748	19861024
JP 62106033 A		JP 1986-252116	19861024
JP 05058609 B		JP 1986-252116	19861024
US 4720597 A		US 1986-922914	19861024

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05058609 B	Based on	JP 62106033 A

PRIORITY APPLN. INFO: **DE 1985-3538132 19851026**
ES 1986-2748 19861024

INT. PATENT CLASSIF.:
MAIN: C07C031-133
IPC RECLASSIF.: B01J0023-00 [I,A]; B01J0023-00 [I,C]; B01J0023-16 [I,C]; B01J0023-26 [I,A]; C07B0061-00 [I,A]; C07B0061-00 [I,C]; C07C0029-00 [I,C]
MAIN/SEC.: C07C029-13
; C07C0029-136 [I,A]; C07C0029-149 [I,A]; C07C0031-00 [I,C]
; C07C031-13
; C07C0031-133 [I,A]

BASIC ABSTRACT:
DE 3538132 A UPAB: 20050424
Production of cyclopropyl methanol (I) is effected by hydrogenating a cyclopropane carboxylate ester (II) in the presence of a Zn chromite **catalyst** in a slurry- or trickle-phase reactor, at an H2 pressure of 200-320 bar and a temperature of 200-350 deg.C.
Pref. the reaction occurs at 240-380 deg.C and 240-300 bar using a 1-8C alkyl cyclopropane- carboxylate. The **catalyst** (e.g. BASF S5-10) contains 40-80% ZnO and 20-40% Cr2O3. The process is operated batchwise is a slurry-phase reactor (e.g. autoclave) or continuously in a trickle-phase (e.g. fixed-bed) reactor with co- or countercurrent H2 flow.
USE/ADVANTAGE - (I) is an intermediate for bactericides, fungicides, herbicides and insecticides. Process gives quantitative yields without using expensive or difficult-to-handle additives. MANUAL CODE: CPI: C10-E04B; E10-E04F; N03-D; N03-F

Member(0004)
ABEQ US 4720597 A UPAB 20050424
Selective prodn. of hydroxymethylcyclopropane (I) comprises hydrogenation of a cyclopropanecarboxylic acid ester (II) in liq. phase in the presence of a **catalytic** amt. of zinc chromite at elevated temp. (pref. 200-350 (200-300) (240-300) deg. C.) and H2 pressure of 200-320 (240-300) br. Pref., cpds. (II) are esters of 1-10C (esp. 1-8C) alcohols. The methyl ester, n-butyl ester and 2-ethylhexyl ester of cyclopropane carboxylic acid being pref..
USE/ADVANTAGE - Cpd. (I) is obtd. in very high yield. Cpd. (I) is an intermediate for bactericides, fungicides, herbicides and insecticides.

Member(0008)
ABEQ JP 93058609 B UPAB 20050424
Prodn. of cyclopropyl methanol (I) is effected by hydrogenating a cyclopropane carboxylate ester (II) in the presence of a Zn chromite **catalyst** in a slurry- or trickle-phase reactor, at an H2 pressure of 200-320 bar and a temp. of 200-350 deg.C.
Pref. the reaction occurs at 240-380 deg.C and 240-300 bar using 1-8C alkyl cyclopropane- carboxylate. The catalyst (e.g. BASF S5-10) contains 40-80% ZnO and 20-40% Cr2O3. The process is operated batchwise ia a slurry-phase reactor (e.g. autoclave) or continuously in a trickle-phase (e.g. fixed-bed) reactor with co- or countercurrent H2 flow.
USE/ADVANTAGE - (I) is an intermediate for bactericides, fungicides, herbicides and insecticides. Process gives quantitiative yields without using expensive or difficult-to-handle additives. (J62106033-A)

L73 ANSWER 14 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1986-256691 [39] WPIX
DOC. NO. CPI: C1986-111166 [21]
TITLE: Shaping activated copper- or zinc **chromite** - by extrusion with inorganic binder

and pelleting to form air-stable, non-hydroscopic **catalyst** for solid bed systems

DERWENT CLASS: E19; E31; J04
INVENTOR: ARTENE G; BANCILA V; BEJENARU G; BLEJOIU S; COJOCARU G; OPRESCU I; PREDETEANU F
PATENT ASSIGNEE: (CHOR-N) CENT CHIM ORGAN BUCUR; (CHCR-N) COMB CHIMIC CRAIOVA
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
RO 88984	A	19860331	(198639)*	RO			<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RO 88984 A		**RO 1984-114345**	**19840423**

PRIORITY APPLN. INFO: **RO 1984-114345 19840423**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0023-16 [I,C]; B01J0023-26 [I,A]; B01J0023-72 [I,A]; B01J0023-72 [I,C]

BASIC ABSTRACT:
RO 88984 A UPAB: 20050425
Cu- or Zn-chromite, activated and stabilised with Ba, Mn, Ca, etc. are shaped by oellet-formation, comprising extrusion with an inorganic binder.
USE/ADVANTAGE - Energy consumption is reduced by over 50% and toxicity and corrosiveness are lowered appreciably. Non-hygroscopic **catalysts** are formed, which are highly stable in air, and useful in hydrogenation, reduction, desulphurising and the dehydrogenation of alcohols in gas-solid fixed bed, as well as gas-liquid solid fixed bed systems.
MANUAL CODE: CPI: E35-A; E35-C; E35-P; J04-E04; N03-D; N03-F

L73 ANSWER 15 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1983-23842K [10] WPIX
DOC. NO. CPI: C1983-023309 [21]
TITLE: Ethylene glycol production by oxalic ester hydrogenation - using a **catalyst** containing copper and chromium, in as solvent e.g. a lower alcohol

DERWENT CLASS: E17
INVENTOR: KOBAYASHI M; MASAI H; MIYAMORI H; SHIMOMURA T; UNO H
PATENT ASSIGNEE: (MITN-C) MITSUBISHI GAS CHEM CO INC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
JP 58015930	A	19830129	(198310)*	JA	7		<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 58015930 A		**JP 1981-114094**	**19810721**

INT. PATENT CLASSIF.:

IPC RECLASSIF.: B01J0023-00 [I,A]; B01J0023-00 [I,C]; B01J0023-76 [I,C]; B01J0023-86 [I,A]; C07B0061-00 [I,A]; C07B0061-00 [I,C]; C07C0027-00 [I,A]; C07C0027-00 [I,C]; C07C0029-00 [I,C]; C07C0029-136 [I,A]; C07C0029-149 [I,A]; C07C0031-00 [I,C] ; C07C0031-20 [I,A]; C07C0067-00 [I,A]; C07C0067-00 [I,C]

BASIC ABSTRACT:

JP 58015930 A UPAB: 20050421

The preparation of ethylene glycol, an oxalic ester of formula ROC(:O)C(:O)OR' pref. di(m)ethyl oxalate, di-n-propyl oxalate or di-n-butyl oxalate, is hydrogenated in a liquid phase in the presence of a hydrogenating **catalyst** containing copper and chromium as metal components, e.g. copper chromite, copper **zinc chromite** , copper barium chromite, copper nickel chromite or copper cobalt chromite is claimed. As reaction solvent, one or more of (1) 4-20C saturated aliphatic alcohols, (2) 4-20C alcohols containing per molecular at least 1 oxygen in addition to the OH one, the oxygen atoms being bonded together via 2 or more carbon atoms, (3) ethers of formula R'O(CHXCHYO)n(R3) and (4) cyclic ethers is used. Solvent pref. contains up to 0.1 w/v% (partic. up to 0.05 w/v%) of water and is pref. used in an amount 1-30 (2-5) times weight of oxalic ester.

(R and R' are (ar)alkyl, or substd. (ar)alkyl. R' and R3 are 1-4C alkyl. X and Y are H, CH3 or C2H5. n is 1-10). Ethylene glycol can be produced in high yields and at high selectivity under a relatively low pressure of up to 200 atmospheric The **catalyst** is pref. used in an amount of 1-80 (2-40) pts. weight, per 100 pts. weight of oxalic ester. The reaction is pref. conducted at 180-350 (200-300) deg.C, under a pressure of at least 80 (100-300) kg/sq.cm.G. MANUAL CODE: CPI: E10-E04B; N01-B; N02-B01; N02-C; N03-D; N03-F

L73 ANSWER 16 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1980-003245 [20] WPIX
TITLE: **Catalyst** for fatty acid hydrogenation to fatty alcohol - contains copper chromite, **zinc chromite**, copper oxide and zinc oxide mixture

DERWENT CLASS: E17; J04
PATENT ASSIGNEE: (RAFI-N) INST RAFINAR PETROC
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
RO 67908	A	19791130	(198020)*	RO			<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RO 67908 A		**RO 1975-81499**	**19750226**

INT. PATENT CLASSIF.:
MAIN/SEC.: B01J023-86
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L73 ANSWER 17 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1978-43955A [24] WPIX
TITLE: Xylene mixture production by methylation of toluene - using **zinc chromite** and alkali metal exchanged molecular sieve, giving low amount of meta-isomer

DERWENT CLASS: E14
INVENTOR: SEITZER W H
PATENT ASSIGNEE: (SUNO-C) SUN OIL CO PENNSYLVANIA
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
US 4086289	A	19780425	(197824)*	EN			<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4086289 A		**US 1977-813158**	**19770705**

INT. PATENT CLASSIF.:
IPC RECLASSIF.: C07C0002-00 [I,C]; C07C0002-86 [I,A]

BASIC ABSTRACT:

US 4086289 A UPAB: 20050417

The methylation of toluene with H2 and CO and/or CO2 to give a mixture of xylenes uses as **catalyst** Zn chromite mixed with an alkali metal exchanged molecular sieve containing a stoichiometric excess of an alkali metal carbonate. Pref. the molecular sieve is a K exchanged zeolite 13X.

The xylenes mixture contains a low proportion of m-isomer and ethyl benzene and a relatively high proportion of p-xylene. MANUAL CODE: CPI: E10-J02B3; N03-D; N03-F

L73 ANSWER 18 OF 22 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 1975-39483W [24] WPIX
TITLE: Aldehyde or ketone production by alcohol dehydrogenation - with a doped **zinc chromite** **catalyst** containing extra chromium oxide

DERWENT CLASS: E19
PATENT ASSIGNEE: (WACK-C) WACKER CHEM GMBH
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC	
DE 2358254	A	19750605	(197524)*	DE			<--
DE 2358254	B	19780105	(197802)	DE			<--

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 2358254 A		**DE 1973-2358254**	**19731122**

INT. PATENT CLASSIF.:
MAIN/SEC.: B01J023-86; C07C045-16; C07C047-02; C07C049-06

BASIC ABSTRACT:

DE 2358254 A UPAB: 20051230

In a process for the production of aldehydes or ketones by dehydrogenation of prim. or sec. 5-15C alcohols in the presence of a Zn chromite **catalyst** (ZnO:Cr2O3 molar ratio=0.8-1.2:0.5-0.8) doped with 2-10 weight% CuO and 0.5-5 weight% CdO, an additional 5-15 (pref. 8-10) weight% Cr2O3 is incorporated in the **catalyst** by adding NH4 dichromate and heating at 300-450 degrees C. Addition of Cr2O3 increases the activity selectivity and life of the **catalyst**; dehydration side reactions are totally eliminated and by-product formation (aldehydes or ketones with fewer C atoms) is limited to <1.5 weight%; conversions of 85-90% can be achieved.

MANUAL CODE: CPI: E10-D01C; E10-F02B; E35-C; E35-P

L73 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:709025 HCAPLUS Full-text
DOCUMENT NUMBER: 129:315961
TITLE: Process for producing halogenated hydrocarbons
INVENTOR(S): Tatematsu, Shin
PATENT ASSIGNEE(S): Asahi Glass Company Ltd., Japan
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847841	A1	19981029	WO 1998-JP1850	19980422
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 957074	A1	19991117	EP 1998-917629	19980422
EP 957074	B1	20030219		
EP 957074	B2	20060111		
R: BE, DE, ES, FR, GB, IT, NL				
ES 2192768	T3	20031016	ES 1998-917629	19980422
US 6172270	B1	20010109	US 1998-147432	19981223
			JP 1997-106376 A	19970423
			WO 1998-JP1850 W	19980422

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 129:315961
ED Entered STN: 09 Nov 1998
AB Dichlorotrifluoroethane or the like represented by formula C2HClxFy (x, y = 1-5, y = 0-4, and x+y = 5) is fluorinated with hydrogen fluoride in the presence of a specific fluorination catalyst (1) comprising at least one metal selected among zinc, zirconium, and manganese and a composite oxide of chromium, (2) having fluorination catalyst surface of 100-250 m2/g prior to using it for fluorination, and (3) not showing crystallinity, which is typical to chromium oxide, before or during fluorination, to give R-125 and intermediates therefor represented by formula C2HClx-zFy+z (1≤z≤x≤5, y = 0-4, and x+y = 5). The above catalyst possesses high activity and durability and gives R-125 with relatively reduced amount of R-115. Thus, 7.2 L 10 weight% aqueous NH3 was slowly added dropwise to a solution of 2,570 g chromium nitrate and 100 g zinc nitrate in 15 L purified H2O. The hydroxides formed were stirred at 80° for 1 h to obtain a precipitate of the hydroxides which was filtered off, washed three times with hot water at 80°, dried at 100° for 10 h, and molded into pellets. The pellets were fired at 380° for 8 h to give zinc-chromium complex oxide with low crystallinity based on X-ray diffraction anal. The pellets (100 mL) were packed in an inconel reactor and activated by passing a mixture of HF and N at 250° with contact time of 10 s for 24 h. A 3:1 mol mixture of HF/R-123 was fed to the reactor at 290° with contact time of 10 s to give R-124 and R-125 with 52 and 47% selectivity , resp., concentration of R-115 of 980 ppm, and 45% conversion of R-123 after 2 days, and R-124 and R-125 with 41 and 58% selectivity, resp., concentration of R-115 of 500 ppm, and 68% conversion of R-123 after 310 days.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L73 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:886080 HCAPLUS Full-text
DOCUMENT NUMBER: 123:260369
TITLE: Fluorination of saturated aliphatic halogenated hydrocarbons in the vapor phase using crystallized **catalysts**.
INVENTOR(S): Garcia, Francois; Lacroix, Eric; Lorch, Alain; Rousset, Abel
PATENT ASSIGNEE(S): Elf Atochem S.A., Fr.
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 657408	A1	19950614	EP 1994-402779	19941205
EP 657408	B1	19971029		
R: DE, ES, FR, GB, GR, IT, NL				
FR 2713633	A1	19950616	FR 1993-14779	19931209
FR 2713633	B1	19960119		
CA 2136938	A1	19950610	CA 1994-2136938	19941129
ES 2110201	T3	19980201	ES 1994-402779	19941205
AU 9480340	A	19950615	AU 1994-80340	19941208
JP 07206728	A	19950808	JP 1994-306172	19941209
CN 1107827	A	19950906	CN 1994-119762	19941209
			FR 1993-14779 A	19931209

PRIORITY APPLN. INFO.:
ED Entered STN: 31 Oct 1995
AB The title hydrocarbons are fluorinated by HF in the vapor phase in the presence of (un)supported Cr oxides optionally containing ≥1 other active metal, with most of the metal oxides being in the crystalline state and the unsupported catalyst having a surface area of ≥8 m2/g after HF-activation. The presence of a highly crystalline state and a surface area of ≥8 m2/g improve the use life of the catalysts.

L73 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:255360 HCAPLUS Full-text
DOCUMENT NUMBER: 122:12515
TITLE: Production of difluoromethane by fluorination of dichloromethane
INVENTOR(S): Scott, John David; Watson, Michael John; Bonniface, David William
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9421580	A1	19940929	WO 1994-GB498	19940314
W: AU, BR, CA, CN, FI, JP, KR, NO, RU, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2157528	A1	19940929	CA 1994-2157528	19940314

CA 2157528	C	20050510	CA 1994-2157878	19940314
CA 2157878	A1	19940929		
CA 2157878	C	20050301	AU 1994-62134	19940314
AU 9462134	A	19941011		
AU 691487	B2	19980521	BR 1994-6201	19940314
BR 9406201	A	19951212	EP 1994-909204	19940314
EP 690833	A1	19960110		
EP 690833	B1	19980520		
R: BE, DE, ES, FR, GB, IE, IT, LU, NL, PT				
CN 1119431	A	19960327	CN 1994-191525	19940314
CN 1057750	B	20001025		
CN 1119432	A	19960327	CN 1994-191526	19940314
CN 1044227	B	19990721		
JP 08508029	T	19960827	JP 1994-520764	19940314
ES 2115940	T3	19980701	ES 1994-909203	19940314
ES 2116586	T3	19980716	ES 1994-909204	19940314
RU 2116288	C1	19980727	RU 1995-118158	19940314
ZA 9401818	A	19940926	ZA 1994-1818	19940315
ZA 9401826	A	19940926	ZA 1994-1826	19940315
IN 188326	A1	20020907	IN 1994-DE297	19940316
IN 187446	A1	20020427	IN 1994-DE298	19940516
US 5763704	A	19980609	US 1995-522241	19950906
PRIORITY APPLN. INFO.:			GB 1993-6072	A 19930324
			GB 1993-6089	A 19930324
			WO 1994-GB498	W 19940314

ED Entered STN: 21 Dec 1994

AB A process of the production of CH2F2 comprises contacting CH2Cl2 with HF in the presence of a fluorination catalyst comprising zinc or a compound of zinc and a metal oxide, fluoride or oxyfluoride. Passing CH2Cl2, HF, and nitrogen (HF/CH2Cl2 mol ratio 27.1) over a zinc/chromium mixed oxide catalyst at 250° gave 92% CH2F2.

L73 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1947:11901 HCAPLUS

DOCUMENT NUMBER: 41:11901

ORIGINAL REFERENCE NO.: 41:2428f-i

TITLE: Vinyl esters

PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 581501		19461015	GB	

ED Entered STN: 22 Apr 2001

AB Vinyl esters of carboxylic acids may be prepared by passing a mixture of C2H2 (I) and vaporized acid over a mixed-oxide catalyst, e.g., Zn-Cd or Zn-Cd-Hg chromite. The chief advantages of the process are selectivity in the formation of vinyl esters and long catalyst life. Into a reactor tube charged with 25 ml. Zn-Cd-Hg chromite catalyst, maintained at 215° and flushed with N, was passed I at the rate of 10.7 g. per hr. mixed with HOAc (II) vapor at the rate of 8.1 g. per hr. (molar ratio 3:1) with a space velocity of 500 ml. gas per ml. catalyst per hr. and a contact time of 5 sec. From 106.8 g. II was obtained 125.6 g. crude product, which on distillation gave 95.3 g. vinyl acetate and 23.7 g. recovered II suitable for recycling. No MeCH(OAc)2 was isolated. Vinyl butyrate and vinyl diethylacetate were prepared by similar reactions. A typical catalyst was prepared by adding 2 l. of an aqueous

solution of 504 g. (NH1)2Cr2O7 and 270 g. 28.5% NH4OH to 980 g. Zn(NO3)2.6H2O, 123 g. Cd(NO3)2.4H2O, and 81 g. HgCl2 in 3 l. water; 305 ml. addnl. 28.5% NH4OH then was added to give a mixture with pH 7.1-7.2. The precipitate was washed, dried at 110 °, and ignited at 400° to give the Zn-Cd-Hg chromite as a black powder. Binders such as NH4H2PO4, H3BO3, or Na silicate in 1-2% concentration are useful in preventing disintegration of the catalysts.

Search History

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L1  (         1)SEA ABB=ON  PLU=ON  12018-19-8/RN
L2  (       562)SEA ABB=ON  PLU=ON  L1
L3  (        48)SEA ABB=ON  PLU=ON  AMOS T?/AU
L4  (      3927)SEA ABB=ON  PLU=ON  RAO V?/AU
L5  (        82)SEA ABB=ON  PLU=ON  SIEVERT A?/AU
L6  (        75)SEA ABB=ON  PLU=ON  SUBRAMONEY S?/AU
L7            3 SEA ABB=ON  PLU=ON  (L3 OR L4 OR L5 OR L6) AND L2
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    FILE 'WPIX' ENTERED AT 09:37:43 ON 09 FEB 2007
                ACT LAO628WX1AU/A
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L8  (         1)SEA ABB=ON  PLU=ON  12018-19-8/RN
L9              SEL PLU=ON  L8 1- NAME :       7 TERMS
L10 (        30)SEA ABB=ON  PLU=ON  L9
L11 (        30)SEA ABB=ON  PLU=ON  L10 OR L8
L12 (         5)SEA ABB=ON  PLU=ON  AMOS T?/AU
L13 (       471)SEA ABB=ON  PLU=ON  RAO V?/AU
L14 (        84)SEA ABB=ON  PLU=ON  SIEVERT A?/AU
L15 (        18)SEA ABB=ON  PLU=ON  SUBRAMONEY S?/AU
L16           2 SEA ABB=ON  PLU=ON  (L12 OR L13 OR L14 OR L15) AND L11
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    FILE 'HCAPLUS' ENTERED AT 09:37:47 ON 09 FEB 2007
                ACT LAO628HC1A/A
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L17 (         1)SEA ABB=ON  PLU=ON  12018-19-8/RN
L18 (       117)SEA ABB=ON  PLU=ON  L17(L)CAT/RL
L19 (       562)SEA ABB=ON  PLU=ON  L17
L20 (       112)SEA ABB=ON  PLU=ON  L19(L)PREP/RL
L21 (         1)SEA ABB=ON  PLU=ON  HYDROGEN FLUORIDE/CN
L22 (       208)SEA ABB=ON  PLU=ON  7664-39-3/CRN
L23 (     42332)SEA ABB=ON  PLU=ON  L21
L24 (       800)SEA ABB=ON  PLU=ON  L22
L25 (         4)SEA ABB=ON  PLU=ON  L18 AND L23
L26 (         2)SEA ABB=ON  PLU=ON  L20 AND L23
L27 (         4)SEA ABB=ON  PLU=ON  (L25 OR L26)
L28 (         0)SEA ABB=ON  PLU=ON  ((L18 OR L20)) AND L24
L29 (       191)SEA ABB=ON  PLU=ON  L19 AND CATAL?/OBI
L30 (         4)SEA ABB=ON  PLU=ON  L29 AND L23
L31 (         0)SEA ABB=ON  PLU=ON  L29 AND L24
L32 (         4)SEA ABB=ON  PLU=ON  (L27 OR L30)
L33 (      1016)SEA ABB=ON  PLU=ON  FLUORINATION CATALYSTS/CT
L34 (         3)SEA ABB=ON  PLU=ON  L18 AND L33
L35 (         1)SEA ABB=ON  PLU=ON  L20 AND L33
L36 (         3)SEA ABB=ON  PLU=ON  (L34 OR L35)
L37           4 SEA ABB=ON  PLU=ON  (L27 OR L28 OR L32 OR L31 OR L36)
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L38 (        48)SEA ABB=ON  PLU=ON  (CR (L) ZN (L) O)/ELS (L) 3/ELC.SUB
L39 (       366)SEA ABB=ON  PLU=ON  (CR (L) O)/ELS (L) 2/ELC.SUB
L40 (       775)SEA ABB=ON  PLU=ON  L38
L41 (     44874)SEA ABB=ON  PLU=ON  L39
L42 (       171)SEA ABB=ON  PLU=ON  L40 AND L41
L43 (       141)SEA ABB=ON  PLU=ON  L40(L)PREP/RL
L44 (       248)SEA ABB=ON  PLU=ON  L40(L)CATA?/OBI
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L45 (        59)SEA ABB=ON  PLU=ON  L44 AND L41
L46 (       187)SEA ABB=ON  PLU=ON  L40(L)CAT/RL
L47 (        45)SEA ABB=ON  PLU=ON  L46 AND L41
L48 (         1)SEA ABB=ON  PLU=ON  HYDROGEN FLUORIDE/CN
L49 (     42332)SEA ABB=ON  PLU=ON  L48
L50 (         4)SEA ABB=ON  PLU=ON  L47 AND L49
L51 (         6)SEA ABB=ON  PLU=ON  L46 AND L49
L52 (         7)SEA ABB=ON  PLU=ON  L44 AND L49
L53 (         6)SEA ABB=ON  PLU=ON  (L42 OR L43) AND L49
L54 (      4236)SEA ABB=ON  PLU=ON  HALOGENATION CATALYSTS+OLD,NT/CT OR
              FLUORINATION CATALYSTS+OLD,NT/CT
L55 (         7)SEA ABB=ON  PLU=ON  L40 AND L54
L56 (         7)SEA ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR L46 OR L47)
              AND L54
L57           8 SEA ABB=ON  PLU=ON  (L50 OR L51 OR L52 OR L53 OR L55 OR L56)
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    FILE 'WPIX' ENTERED AT 09:37:50 ON 09 FEB 2007
                ACT LAO628WX1A/A
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L58 (         1)SEA ABB=ON  PLU=ON  12018-19-8/RN
L59 (         1)SEA ABB=ON  PLU=ON  HYDROGEN FLUORIDE/CN
L60             SEL PLU=ON  L58 1- NAME :       7 TERMS
L61 (        30)SEA ABB=ON  PLU=ON  L60
L62 (        30)SEA ABB=ON  PLU=ON  L61 OR L58
L63             SEL PLU=ON  L59 1- NAME :      14 TERMS
L64 (     14552)SEA ABB=ON  PLU=ON  L63
L65 (     14553)SEA ABB=ON  PLU=ON  L64 OR L59
L66 (        21)SEA ABB=ON  PLU=ON  L62 AND CATAL?/BI,ABEX
L67 (         3)SEA ABB=ON  PLU=ON  L62 AND L65
L68 (        20)SEA ABB=ON  PLU=ON  L66 AND (PY<=2003 OR AY<=2003 OR PRY<=2003)

L69          20 SEA ABB=ON  PLU=ON  (L67 OR L68)
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    FILE 'HCAPLUS' ENTERED AT 09:39:14 ON 09 FEB 2007
                D QUE L7

    FILE 'WPIX' ENTERED AT 09:39:27 ON 09 FEB 2007
                D QUE L16

    FILE 'WPIX, HCAPLUS' ENTERED AT 09:39:45 ON 09 FEB 2007
L70           3 DUP REM L16 L7 (2 DUPLICATES REMOVED)

    FILE 'HCAPLUS' ENTERED AT 09:40:26 ON 09 FEB 2007
                D QUE L37
                D QUE L57

    FILE 'WPIX' ENTERED AT 09:40:44 ON 09 FEB 2007
                D QUE L69
L71          18 SEA ABB=ON  PLU=ON  L69 NOT L16

    FILE 'HCAPLUS' ENTERED AT 09:41:21 ON 09 FEB 2007
L72           5 SEA ABB=ON  PLU=ON  (L37 OR L57) NOT L7

    FILE 'WPIX, HCAPLUS' ENTERED AT 09:41:50 ON 09 FEB 2007
L73          22 DUP REM L71 L72 (1 DUPLICATE REMOVED)

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